



iTel Wholesale Switch

Lead the Wholesale Industry
With Cutting Edge Features

- ✓ Most Advanced Fraud Detection System in the Industry
- ✓ Scalability up to 100000 Concurrent Calls
- ✓ Integrated with Real Time Billing
- ✓ 1+1 Redundancy with Hot Standby
- ✓ Wholesale SMS & Mobile Top Up
- ✓ Absolute Prepaid with traditional Postpaid Platform
- ✓ All Possible Routing in the Industry
- ✓ Multi Location and Language based 24x7x365 Support

BRAND NEW WHOLESALE FEATURES IN A SINGLE SWITCH

RATE PLAN NORMALIZATION

- Converts any termination client's rate plan format to the native format
- Easy uploading of different rate plans and conversion into respective templates
- Systems converts all templates into native rate plan format and makes life easier

CLI & NON CLI TESTER

- Only Softswitch in the industry that detects CLI & Non CLI calls
- Systems notifies the user if the caller ID is not same as the one displayed in termination end i.e. if the number has been changed
- Report generation on CLI & Non CLI calls

WEBRTC - SIP GATEWAY

- Complete inter compatibility between WebRTC and SIP Gateway
- Enables users to initiate & receive VoIP calls to/from SIP service over WebRTC using any desktop or mobile browsers. No third party plugins are needed.
- Allows users to enjoy Click-to-call, video call, video conference, web chat, screen sharing, file transfer and more features
- Scalable, highly secure communication and easily managed

NEVER GO NEGATIVE

- Only Softswitch that prevents user's account balance from going negative
- Monitors all running calls of Switch in real time to check if any user's balance is extremely low or Zero
- Automatic call drop' before user account balance turns negative

INSTANT WHOLESALE

- Instant online signup for Carriers
- Instant route selling and buying in a single platform
- Online payment & balance withdraw facility
- All types of reporting in each panel

CALL & ROUTE SIMULATOR

- Available route checking facility for selected client and a dialed destination
- Routing Sequence and its status checking facility among available routes
- Based on current capacity and Route Status system will show data.
- Call from any specific Carrier of any level to check rate, route & balance issue

CORE FEATURES

CLIENT MANAGEMENT

- Supports 3 types of clients (Originating, Terminating and Both)
- Manages CPS for Originating & Terminating client
- Supports both Prepaid and Postpaid Payment
- Termination prefix and strip prefix to adjust termination call with prefix
- Client authentication by IP & Prefix

LCR

- Base Rate Plan can be managed
- Multiple Offer Can Manage (Gold, Silver, Bronze)
- Analysis Rate for Multiple Termination Carrier
- Create Offer Rate for Origination Carrier
- Compare carrier Rate with Offer Date (Rate Increase, Decrease and No change view facility)
- Direct Mail to Carrier

GROUP ROUTING

- Different route setting under a single route group or more
- Easy assigning a specific group to clients with similar preference of routes.
- Minimum and Maximum digits for each destination can be set.
- Enormous time & hassle of assigning routes to clients individually & repeatedly is avoided

RECONCILE MODULE

- Admin can select time slot to do this operation
- Can select all client or specific clients
- Admin can choose current rate plan or new rate plan to re-rate CDR
- Reprocessing will be done only for the changed rate/s of calling destination, not for all CDR

RATE PLAN MANAGEMENT

- Prefix wise multiple rate plan
- Supports pick & off pick based rate management
- Easy modification of rate plan by changing (% value) in existing plan
- Future date wise scheduled rate management
- Destination wise TAX activation facility
- Fast upload and easy to download rate plan as CSV file.
- Types of Rating: Per minute, Per Second, Fixed Price per Call etc.

CLI MODIFICATION

- Dial Number Translation
- Caller ID Modification
- Caller ID Allow/Block
- Dial Number Length Verification & Block

ADVANCED ROUTING

- Dialed destination based Routing
- Loss Less Routing (LLR)
- Least Cost Routing (LCR)
- Percentage (%) Based Routing
- Quality Based (ACD/ASR/PDD) Routing
- Time Based Routing
- Quality Based LCR Routing
- LRN and MNP dip based Routing
- Source & Destination based Routing
- Overflow & Route Capacity based Routing
- Specific Prefix based Rate plan and Route Tagging to maximize Profit

CORE FEATURES

USER BEHAVIOR BASED REPORTING

- Shortcut links suggestion for user in the login page based on their mostly accessed reports
- No hassle of selecting monitoring report options over and over

REPROCESS CDR

- Admin can select time slot to do this operation
- All client or specific clients can be selected
- Admin can choose current rate plan or new rate plan to re-rate CDR
- Reprocessing will be done only for the changed rate of calling destination, not for all CDR

INVOICE MANAGEMENT

- Supports client to client invoice customization
- Supports auto & manual invoice generation
- Invoice generation in both CSV and PDF format
- Notification of invoice via both email and SMS
- Invoice Configuration
 - Client-wise
 - Daily or weekly or Monthly
 - Specific Date and time Zone Wise
 - Due Date Management
- Single invoice facility for multiple services (Voice, SMS, MTU etc.)
- Stores all previous invoice log
- Payment posting facility and tagging option against each invoice

ANALYSIS & REPORTING

- Dashboard monitoring
- Real time report on active call, live call logs & SIP log trace.
- Custom report generation (Origination/ Termination Client wise, IP Wise etc.) based on user's demand
- Detailed report (Successful, Failed Authentication Failed).
- Summary report (Hourly, Daily, Monthly)
- Specific Search (Callee and Called Number, Duration based, Disconnect Cause Code).
- Gateway/ACD/ASR/PDD wise report.
- Comprehensive Monitoring Reports in graph format (Time wise, Client Wise, Hourly, Daily, Monthly)

NET-OFF/BILATERAL MANAGEMENT

- Summary report generation to check & compare call amount, recharge amount, profit, remaining balance and more.

SALES PERSON WISE ACCOUNT MANAGEMENT

- Sales person wise individual reports generation to check number of clients they handle, profit/loss status, call volume and more

CORE FEATURES

ACTIVITY LOG

- Highest security level to check billing modifications for modules like 'Client Add', 'Delete', 'PinAdd/Delete', 'Rate Plan Add/Delete', 'Rate Change Information', etc.
- All billing activities can be traced by selecting the specific dates, time and who worked at which time from which login IP, etc.

WHOLESALE SMS

- Easy SMS rate management
- Supports HTTP and SMPP gateway
- Easy route management
- User friendly, detailed and summary report
 - Failed, successful & pending report
 - Group report by SMS type, Sender, Receiver, Country
- Profit loss analysis and invoice management

REAL-TIME BILLING

- Mid-Call Re-AUTHORIZATION after every set time interval for True Prepay.
- Safe Amount / Percentage Margin / Credit Limit based Call Snapping
- Pre-pay & Post-pay Billing
- Real-time CDR Processing
- Multi-Currency Support
- Blocking / Unblocking of Destinations
- Online Payment Gateway Integration
- Periodic & Instant Invoice Generation
- Customized Billing Cycle
- Invoices in PDF & Excel Format

MOBILE TOP UP

- Supports easy and separate rate plan management
- Supports currency wise conversation rate management
- Standard API for connectivity with originating IP client
- Supports all standard international MTU gateway for termination (Transfer to, Mobi kwik, Ezee top, Recharge now, Pay point, Cellcom, Topup24, REVE Gateway etc.)
- Provides detailed monitoring report, failed cause analysis, profit loss management and invoice generation

ONLINE AND BANK PAYMENT SUPPORT

- Supports online payment gateway
- Supports Debit/Credit card
- Currency conversion and balance adjustment
- Clients can make payments at Bank & upload information in system for the admin

FRAUD & SECURITY MANAGEMENT

INTELLIGENCE ALERT SYSTEM

- Report to trace unauthorized access
- System alert for unusual disk, CPU, memory usage and route down
- Performance alert for unusual ASR, ACD and Average PDD
- Each Route wise separate alert for unusual ASR, ACD and average PDD
- Behavioral alert for unusual no. of calls and termination gateway down
- Alert for unwanted recharge, low balance, and unauthorized user access
- Call loop detection and prevention

MULTILAYER SECURITY

- Protection against hacking attempts
- Auto expiration of IP after a certain number of invalid login attempts
- IP Based Firewall in switch for call authentication
- OTP for 2nd layer authentication
- Encrypted password for database
- Role based access control
- User wise IP based authentication
- Auto expire (After 1st use, After 30 Days and Configurable)
- Billing activity log trace
- DoS/DDOS attack blocking at H/W

ADDITIONAL SERVICES

LOCAL NUMBER PORTABILITY (LNP)

Number portability system is used to change service provider without changing the phone number. A centralized database will keep records of all service providers with phone number. If anyone changes service provider, then system will just change his service provider info against his phone number.

- Easy to manage destination wise routing
- Portability number based rate management
- Detailed reporting
- Connectivity with portability database

DATA BACKUP

- Real time data backup from both main & replication server on a schedule basis
- Complete backup of main database and CDR backup of successful calls which are downloadable
- Data backup in case of Hard drive crash, theft, accidental deletion, malware attack or any kind of natural calamities
- Immediate email notification in case of any urgency

CAMPAIGN MANAGEMENT

Campaign Management facilitates planning, execution, tracking, and analysis of a marketing initiative taken for a new or upgraded product launch or an event using various marketing channels and methods.

- SMS and Email Campaign
- Newsletter Campaign
- Survey Campaign
- Audience engagement and creating brand awareness in the market
- Report generation and tracking

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer relationship marketing (CRM) is a technology that helps admin to manage all your company's relationships and interactions with existing and potential customers.

- Customer contact information management
- identify, add and categorize new leads easily and quickly
- Improved business relationship with customers & partners
- Offering better and personalized customer service to differentiate than competitors
- Improved product, service and profitability

SUPPORT PORTAL WITH ONLINE TROUBLE TICKET

Service Provider can manage quickest support for the carriers and vendors by keeping a support portal integrated with the system.

- Manages support history (Admin, Agent, Super Visor)
- Role based access control
- Detailed reporting on closed and live ticket with various status
- Agent performance management reporting
- Carrier/vendor can also keep a track of their support requests.

SWITCH PARTITION

- Administrator can make switch partition. Every partition will be a completely new switch & child partition switch owner can use it as an independent switch.
- Every switch partition will decrease the admin switch call volume and that volume will be assigned to child partitioned switch.

TECHNICAL SPECIFICATIONS

Supported Protocols & Session Control

- SIP v.2.0 (RFC 3261, RFC 4566), SIP-I
- SMPP v3.4 protocol for SMS and HTTP
- SIP REDIRECT
- RADIUS
- RFC 3863, 3428, 3903, 3515 and new RFC
- Caller-Carrier PTIME isolation
- Media Monitor
- RAW IPDRs / Rated CDRs posted to Mediation Server / Local Memory
- SIP Header Manipulation/Topology Hiding
- Error Code Adaptation
- Support for Proxy and Non Proxy

Tones & Media Functions

- All standard Codec in Transparent Mode: G.711, G.723.1, G.726, G.729a, G.729b, G.729ab, iLBC, G.722, AMR-NB, AMRWB, GSM Codec Support etc.
- Codec Transcoding based on Voice Codec (OPUS,G711,G729)
- Auto In band / Out band DTMF over IP (INFO, RFC 2833)
- Media: RTP, RTCP
- T.38 Fax Relay Protocol

System Architecture

- 1+1 Hot Standby
- Supports distributed Architecture for Robust deployment
- Real time data backup
- Web Server: Jakarta, Apache Tomcat
- Database: Oracle, MySQL, PostgreSQL & MS-SQL

WebRTC Functionality

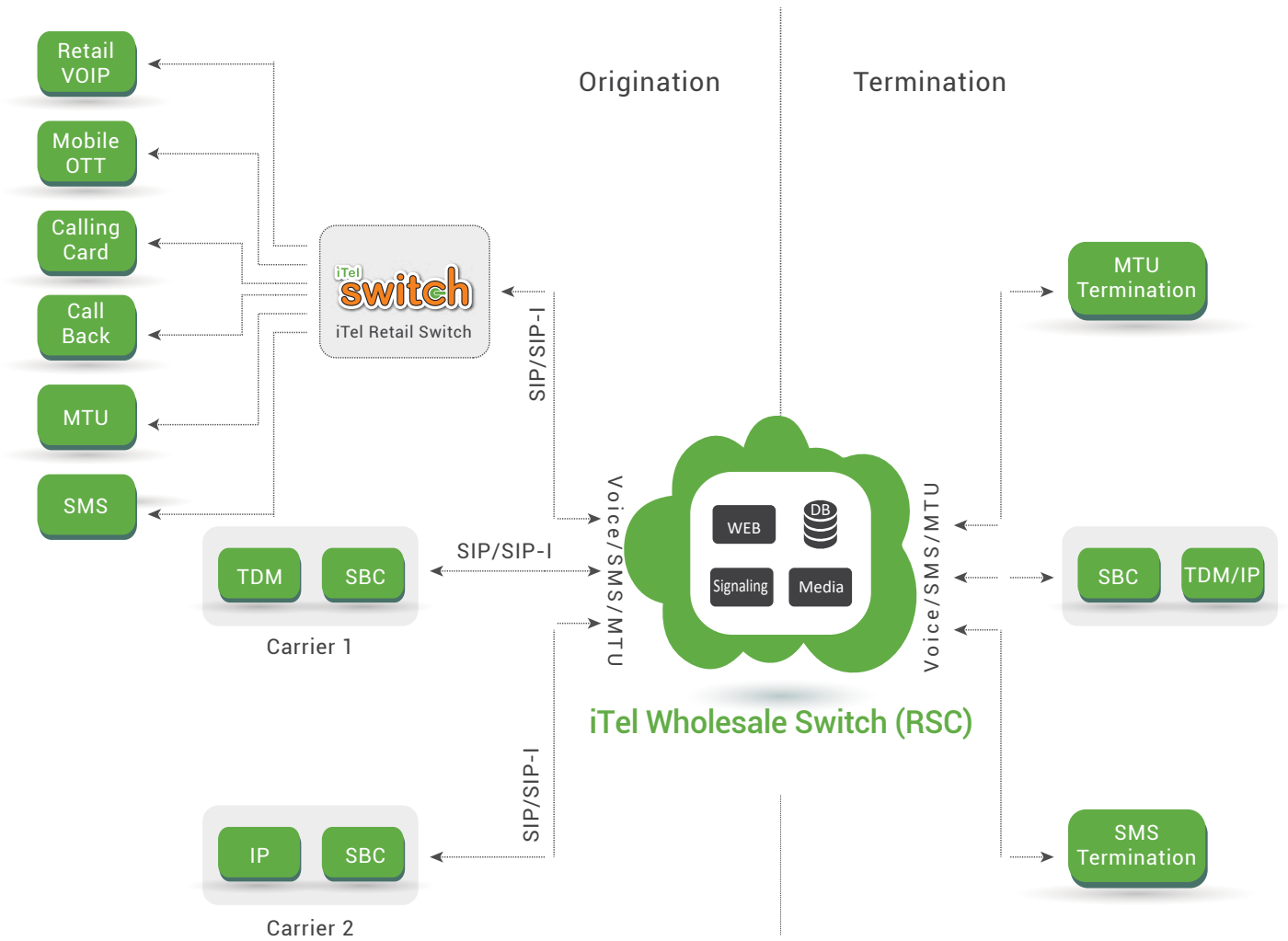
- Compatible with any client that complies with WebRTC standards.
- SIP over Secure WebSocks
- ICE/STUN
- SIP Internetworking

Installation Platforms

- Supports Unix/Linux Based Platform



SOLUTION ARCHITECTURE



SYSTEM PERFORMANCE TEST

Server Specifications

CPU (s) : 6 Cores (12 core by hyper thread)
 Processor Model : Intel(R) Xeon(R) CPU E5-2430 0 @ 2.20GHz
 Cache size : 262144KB
 Total Memory : 32 GB (DDR3, Speed: 1600 MHz)
 HDD : 4 X 500 GB (RADID 5, 7.2 K RPM SATA)
 NIC Card Speed : 1000 Mb/s (Twisted Cable)

Result

Concurrent Call Capacity

- Proxy mode : 5000
- Non-Proxy Mode: 20000
- Transcoding Mode: 3,000
- CPS Value: 1,500
- BHCA: 4320000

4500+
Telecommunication
Service Providers

2000+
Softswitch Installation

78+
Countries

12+
Languages

15+
Years of Experience

100+
Million End Users

RECOGNITIONS



REVE Systems wins
Red Herring's Top 100
Global Award for 2012



Technology. Media. Telecoms.

Recognized Leader in Mobile VoIP
Solutions and Best Softswitch
& Billing Solutions Provider of 2016
TMT Technology Award



iTel Switch wins 2016
INTERNET TELEPHONY
Hosted VoIP Excellence Award



Unified Communications
Excellence Award for
Outstanding
Innovation



iTel Switch wins NGN
Leadership
Award for being
a Global Technology Leader



REVE Systems wins
Digital World 2016
Award for Alapon App in
Software Innovation category

ABOUT REVE SYSTEMS

A RED Herring's 2012 Top 100 Global Winner, REVE Systems is a prominent leader in IP based Communication solutions who started its journey in 2003 with a focused approach to serve the communication industry. As a Telecommunication & Software Solution provider, REVE Systems holds a leadership position in Enterprise Communication, Data & Telecom Billing, Automation, Information Security (Antivirus, 2FA), Live Chat, Deep Packet Inspection (DPI), Secure Printing and Softswitch with Integrated Billing & Bandwidth Optimization solutions. Headquartered in Singapore, REVE has its major development centers in Bangladesh and India with regional presence in USA, UK, Russia, Lebanon and Hong Kong.

NOTABLE CLIENTS



Airtel
(India)



CountryCom
(Russia)



Anwarnet
(Algeria)



Nur Telecom
(Kyrgyzstan)



Bright Telecom LLC
(USA)



DollarPhone
(USA/Canada)



IDT Telecom
(USA)



Tigo
(Venezuela)



Telecom Oman
(Oman)



ICT
(Bangladesh)



21CTL
(Nigeria)



Babilon Mobile
(Tajikistan)

OTHER PRODUCT LINES

REVE chat

REVE[™]
antivirus

WebRTC

REVE
secure

MOBILE OTT

telbilling
Carrier grade billing system

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